ASSIGNMENT 10

Textbook Assignment: “Teletype and Facsimile Equipment,” chapter 11, pages 11-15 through 11-17; and “Radar Theory and Equipment,” chapter 12, pages 12-1 through 12-27.

10-1. What is the designation of any conductor intended to carry classified plain language terminating in RED equipment or at the RED side of cryptographic equipment?

1. Primary red
2. Secondary red
3. Code red
4. Red “in the clear”

10-2. What is the designation of any conductor that does not intentionally carry classified information, but due to the close proximity of RED equipment might carry compromising information?

1. Primary red
2. Red “in the clear”
3. Secondary red
4. Code red

10-3. Which of the following publications contain(s) guidance on maintaining and repairing COMSEC equipment?

1. CSP-1
2. CMS-5
3. COMSEC HDBK-1
4. All of the above

10-4. Which of the following is an example of basic cryptographic equipment?

1. IFF units
2. Power units
3. Extender cables
4. Repair/maintenance kits

10-5. Which of the following items is/are designated “related” cryptographic equipment?

1. Power unit
2. Extender cable
3. Repair/maintenance kit
4. All of the above

10-6. When you have a piece of cryptographic equipment that requires repair beyond the capability of ship’s force, you should arrange repair through which of the following authorities?

1. RSG
2. TYCOM
3. CMS custodian
4. All of the above

10-7. Which of the following facilities repairs cryptographic-equipment?

1. Depot
2. SRF
3. CRF
4. Naval shipyard

10-8. Procedures that you must follow to transfer COMSEC equipment are listed in which of the following publications?

1. CMS-4
2. CMS-5
3. CSP-1
4. All of the above

10-9. Which of the following manuals contain(s) information on operator maintenance of COMSEC equipment?

1. KAM
2. KAO
3. Both 1 and 2 above
4. CRP

10-10. Which of the following publications contain(s) procedures for ordering classified cryptographic equipment-related items?

1. NAVSUP 0641A 4998
2. SPCCINST 5511.24
3. NAVSUP PUB 4107
4. All of the above

QUESTIONS 10-11 THROUGH 10-70 PERTAIN TO CHAPTER 12.

10-11. Radar is used for which of the following purposes?

1. Early detection of surface and air targets
2. Navigation
3. General surveillance
4. All of the above

10-12. Radar is based upon what basic physical science principle?

1. Light beam transfer
2. Electromagnetic wave motion
3. Magnetic attraction
4. Refraction

10-13. Why do naval ships have a high radar cross section?

1. Because of their large mass of metal
2. Because of their numerous L–shaped dimesions
3. Both 1 and 2 above
4. Because of their large quantity of machinery and electronic equipment

10-14. Today’s stealth technology uses which of the following developments to produce low radar signatures?

1. Radar absorbing skin
2. Radical shapes
3. Non-metallic materials
4. All of the above

10-15. On which of the following units is radar visual data normally displayed for shipboard use?

1. CCTV
2. PPI
3. TOI
4. CATV

10-16. What type of radar information can be obtained from a single PPI?

1. Range
2. Bearing
3. Both 1 and 2 above
4. Altitude

10-17. How many scopes must be used to display range, bearing, and altitude of an air target?

1. One
2. Two
3. Three

10–18. Which of the following additional devices can display altitude at any PPI watchstation?

1. PPI with altitude feature
2. IFF interrogator
3. JOTS
4. CUDIX

10-19. At what speed does radar energy travel?

1. 50,000 meters per second
2. 186,000 miles per second
3. 200,000 miles per hour
4. 382,000 kilometers per second

10-20. How much time is required for radar energy to travel 10,000 yards?

1. 30.5 msec
2. 30.5 μpsec
3. 30.5 seconds
4. 30.5 nsec

10-21. What type of radar uses frequency scanning to identify target slant range, angle, and altitude?

1. Radio frequency modulated radar
2. Radar cross section (RCS) radar
3. Height finding radar
4. All of the above

10-22. What method may be used in lieu of heiqht-finding radar to indicate target altitude?

1. Fade charts
2. Pulse modulation
3. Radio altitude finding
4. Radiometric sextant

10–23. Which of the following is a basic characteristic of the Doppler effect?

1. An electromagnetic disturbance of sinusoidal character
2. A change in frequency as an object approaches or retreats from the energy source
3. An audible frequency
4. A change in the strength of a light beam

10-24. Which radar method works well for fast-moving targets but not for slow-moving targets?

1. CW
2. FM
3. Pulse modulation
4. Amplitude modulation

10-25. Which radar method works well for slow-moving targets but not for fast-moving targets?

1. CW
2. FM
3. Pulse modulation
4. Amplitude modulation

10-26. Which of the following radars uses rf energy transmissions of short duration?

1. CW
2. FM
3. Pulse modulation
4. Doppler

10-27. What method of radar modulation does the Navy use?

1. CW
2. FM
3. Pulse modulation
4. Doppler

10-28. What section of the radar generates all the necessary timing pulses and is considered the heart of the radar system?

1. Demodulator
2. Modulator
3. Pulse forming network
4. Local oscillator

10-29. Which of the following terms is/are used to indicate the rate at which the transmitter fires?

1. PRR
2. PRF
3. Both 1 and 2 above
4. TRF

10-30. What portion of the radar increases the voltage of the pulse received from the modulator?

1. Video amplifier
2. Oscillator
3. Pulse transformer
4. Impedance matching device

10-31. What portion of the radar acts as a high speed switch allowing the use of one transmission line for both transmitting and receiving?

1. Duplexer
2. Power amplifier
3. Pulse transformer
4. Wave generator

10-32. What factor limits the maximum range that can be measured on an indicator?

1. Width of the indicator
2. PRR
3. Altitude of the target
4. Antenna height

10-33. As receiver sensitivity is increased, what happens to the minimum discernible signal?

1. It increases
2. It decreases
3. It stays the same
4. It disappears

10-34. Which of the following targets can be detected at the longest range?

1. A single low-flying aircraft
2. A single high-flying aircraft
3. A group of high-flying aircraft
4. A group of low-flying aircraft

10-35. Antenna height can affect maximum range.

1. True
2. False

10-36. In general, what happens to the (a) strength and (b) range of the radar signal as the rotational speed of the antenna is decreased?

1. (a) Decreases; (b) increases
2. (a) Decreases; (b) decreases
3. (a) Increases; (b) decreases
4. (a) Increases; (b) increases

10-37. Which of the following factors determine(s) the closest range at which you can detect a target?

1. Power exponent
2. Pulse forming network
3. Both 1 and 2 above
4. Length of the transmitted pulse

10-38. Which of the following is a receiver feature that allows close target clutter to be eliminated to reveal the true target?

1. STC
2. FTC
3. AGC
4. CCT

10–39. What type of propagation is characterized by extremely long ranges, often changing from day to day?

1. Vertical
2. Horizontal
3. Anomalous
4. Sporadic

10–40. Which of the following conditions cause(s) anomalous propagation?

1. Changes in atmospheric conditions
2. Temperature and moisture content of the air
3. Bending of radar wave
4. All of the above

10-41. Which of the following is an example of a false target?

1. Navigation buoy
2. Commercial aircraft
3. Commercial shipping
4. Flock of birds

10-42. What antenna factor is critical for height finding radars but not for standard radars?

1. How the antenna is attached to the antenna mast
2. How the antenna is attached to the reference frame
3. Having the antenna stabilized
4. The height at which the antenna is located

10-43. What type of radar provides a very narrow, circular beam?

1. Search
2. CAP
3. Fire control
4. Surface

10-44. If a fire control radar has “locked on,” it has entered what phase?

1. Designation
2. Acquisition
3. Mode
4. Track

10-45. Which of the following is a characteristic of fire control radar?

1. Very low prf
2. Wide pulse width
3. Very narrow beamwidth
4. Ease of target detection

10–46. Which of the following radar systems is used to guide a missile to a hostile target?

1. 30 radar
2. Guidance radar
3. 20 radar
4. Search radar

10-47. Which type of missile homing uses energy radiated by the target?

1. Passive homing
2. Active homing
3. Semi-active homing

10-48. To what does the term “missile capture” refer?

1. Retrieval of a practice shot
2. Initial guidance to the center of a guidance beam
3. Initial guidance to a tracking beam

10-49. Fire control radar can be used for which of the following purposes?

1. Providing range and bearing data for calibrating search radars
2. Navigation
3. Detecting low-flying aircraft
4. All of the above

10-50. What is the principal function of surface search radars?

1. Detecting surface targets and low flying aircraft
2. Navigation
3. Surface search
4. Air search

10-51. Which of the following radars will eventually replace the AN/SAPS-10?

1. AN/SAPS-29
2. AN/SAPS-49
3. AN/SAPS-55
4. AN/SAPS-67

10-52. What feature does the AN/SAPS-67(V)3 have over other AN/SAPS-67s?

1. Low Flyer detect
2. DMTI
3. Sector Radiate
4. Automatic scanning

10-53. The AN/SAPS-55 is what type of radar?

1. Air search radar
2. Surface search radar
3. Navigational radar
4. Both 2 and 3 above

10-54. What direction does the ship's heading marker indicate?

1. Relative bearing
2. True bearinq
3. The ship's bow
4. Magnetic heading

10-55. Who must approve installation of commercial navigation radars?

1. EMO
2. Commanding officer
3. NAVSEA
4. TYCOM

10-56. The AN/SAPS-49 is what type of radar?

1. Air search radar
2. Long range radar
3. 2D radar
4. All of the above

10-57. DMTI processing serves which of the following purposes?

1. Provides anti–jamming
2. Identifies moving targets
3. Adds radar range
4. Increases bandwidth

10–58. CSLC serves which of the following purposes?

1. Cancels jamming
2. Increases antenna RPM
3. Increases PRR
4. Increases power

10-59. What is the primary purpose of CCA and GCA radars?

1. Long range tracking
2. Guiding aircraft to safe landings
3. Surface search
4. Fire control

10-60. Which of the following devices provide(s) different selections of shipboard radars to various repeaters?

1. Radar switchboard
2. Radar repeater
3. Both 1 and 2 above
4. Radar CRT

10–61. What target information can an "A" scope display?

1. Range
2. Bearing
3. Height
4. All of the above

10-62. If the top of a radar repeater scope represents true north, the radar is operating in what mode?

1. IFF
2. True bearing
3. Relative bearing
4. Polar coordinates

10–63. Which of the following statements is/are true concerning the rhi?

1. It represents target range and altitude
2. Targets appear as blips
3. Radar clutter is eliminated
4. All of the above

10–64. How is range determined on an AN/SPG-25 repeater?

1. By range rings
2. By a range strobe
3. Both 1 and 2
4. By an azimuth scale

10-65. What important feature does the AN/SPG-25G provide that earlier models of the AN/SPG-25 do not?

1. Manual plotting and range/bearing calculations
2. Automatic plotting and range/bearing calculations
3. Night viewing capability

10-66. How does an AN/SPA-5O differ from an AN/SPA-25?

1. The AN/SPA-50 is a sit down version
2. The AN/SPA-50 has AUTO plotting and range/bearing calculations
3. The AN/SPA-50 has a larger PPI

10-67. What is the primary purpose of mode 2 of the AIMS Mark XII IFF?

1. Identifying a specific aircraft or ship
2. Satellite navigation
3. Providing secure identification of friendly platforms
4. Identifying operational commanders

10–68. Which IFF mode is used for secure identification of friendly platforms?

1. 1
2. 2
3. 3/A
4. 4

10-69. Which IFF mode is used to determine aircraft altitude?

1. C
2. 2
3. 3
4. 4

10–70. Which unit of IFF equipment transmits coded challenges?

1. Decoder
2. Transponder
3. Interrogator
4. Side lobe suppressor